

ABSTRACT OF THE DISCLOSURE

The present invention provides a glass mat thermoplastic comprising a glass mat impregnated with an engineering thermoplastic polyurethane (ETPU) having a T_g of at least 50°C. The glass mat thermoplastic can be prepared, for example, by a) contacting a continuous glass mat with ETPU film or sheet, or between ETPU films or sheets, with sufficient pressure and heat to form a multilayered structure which contains a wetted out glass mat layer sandwiched between an ETPU layer and a glass mat layer, b) thermoforming or compression molding the multilayered structure with sufficient heat to substantially completely wet out the glass mat with the ETPU; and c) cooling the substantially wetted out thermoformed glass mat to a temperature below the T_g of the ETPU. The efficiency with which the depolymerizable and repolymerizable ETPU can be impregnated into the glass mat matrix results in a GMT with excellent physical properties.

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